PRELIMINARY SITUATIONAL ANALYSIS ON NEWBORN CARE IN GHANA

To Inform USAID's Seven Year Strategic Plan

Working Paper

Prepared by:

Marcie Rubardt

Submitted by:

LTG Associates, Inc.

and

TvT Global Health and Development Strategies™
a division of Social & Scientific Systems, Inc.

Submitted to:

The United States Agency for International Development
Under Contract No. HRN-I-00-99-00002-00, Technical Directive Number 63

October, 2002

Preliminary Situational Analysis of Newborn Care in Ghana was prepared under the auspices of the U.S. Agency for International Development (USAID) under the terms of the Monitoring, Evaluation, and Design Support (MEDS) project, Contract No. HRN-I-00-99-00002-00, Technical Directive #63. The opinions expressed herein are those of the authors and do not necessarily reflect the views of LTG Associates, TvT/SSS, or USAID.

Information about this and other MEDS publications may be obtained from:

Monitoring, Evaluation, and Design Support (MEDS) Project
1101 Vermont Avenue, N.W., Suite 900
Washington, DC 20005
Phone: (202) 898-0980
Fax: (202) 898-9397
jklement@medsproject.com
www.medsproject.com

ACKNOWLEDGEMENTS

First, I would like to offer my sincere thanks to all those who took the time to share their ideas on Ghanaian health services and options for strengthening newborn care. I hope this report offers a fair synthesis of the information that was feely offered.

The conclusions and recommendations offered here are based on a limited and preliminary assessment that did not involve potential partners and stakeholders except as informants. Once funds are available, the next step should be a more in depth assessment with participation by the partners and stakeholders. This will allow them to develop their own priorities and strategies for strengthening newborn care, and will contribute towards the necessary ownership within the country for the initiative.

ACRONYMS AND FOREIGN TERMS

BMI	Body Mass Index
CHO	Community Health Officer
CHAG	Christian Health Association of Ghana
CHPS	Community Health Planning and Services
CIDA	Canadian International Development Agency
DHS	Demographic and Health Survey
GRMA	Ghana Registered Midwives Association
IMCI	Integrated Management of Childhood Illness
IMMPACT	Initiative for Maternal Mortality Program Assessment
LBW	Low Birth Weight
MOH	Ministry of Health
RBM	Roll Back Malaria
TT	Tetanus Toxoid
TBA	Traditional Birth Attendant

CONTENTS

ANNEXES

EXECUTIVE SUMMARY

With decreasing child mortality, the proportion of child deaths occurring before 28 days of life is increasing. In Ghana, it is estimated that this may be as many as 21,502 deaths in a year. With the majority of these deaths caused by infection, prematurity, and asphyxia or other birth injuries, there are simple, non-technological interventions that could impact the peri-natal and neo-natal mortality rates. Recognizing these facts, newborn care is already part of national standards and guidelines, and there is significant interest among health policy makers in Ghana to begin to address newborn care at the service levels.

With the majority of births, and presumably also the majority of neonatal deaths, occurring in the community, intervention at this level with essential newborn care should be first priority. This involves identifying and reaching those actually doing deliveries with behavior change strategies addressing clean deliveries, (not) bathing, cord care, kangaroo care, immediate and exclusive breast feeding, avoidance of harmful practices, post partum monitoring, and recognition and referral of danger signs. In addition, inclusion of malaria treatment, and reinforcement of tetanus toxoid immunization, iron supplementation and birth planning during prenatal care can also contribute.

Support for these kind of community level activities can potentially come through the new Community Health Planning and Services (CHPS) initiative which is placing trained nurses in communities to work as partners with the communities themselves to address their health problems.

Facilities as well as private midwives providing services need to be linked with the deliveries and providers in the community for technical supervision and facilitation of referral. In addition, these also need to have their own essential newborn care practices reinforced.

Finally, with the IMMPACT initiative working in Ghana as a lead country, any newborn interventions should be consistent with the newborn care strategies they are seeking to measure.

I. INTRODUCTION

Each year Ghana has an estimated 21,502 neonatal deaths (UN Population Division). This represents approximately 50 percent of infant mortality and approximately 25 percent of under-five mortality. As programs have become more effective in addressing under-five mortality, the proportion of mortality occurring immediately after birth is increasing.

With 32 percent of deaths likely attributable to infection, 24 percent to prematurity, and 29 percent to birth asphyxia and injuries, many of these neonatal deaths can be prevented with simple, cost-effective interventions that do not require fancy equipment or training. Simple things like maintaining warmth, hygiene, cord care, nutrition and immunizations can make the difference. In other cases, simple interventions during the pre-natal period can prevent stillbirths and the low birth weight babies that are at higher risk for death. Finally, prompt recognition and management of complications improves the sick newborn's chances for survival. Only after these simpler interventions are in place, might it make sense to begin to look at more intensive interventions for sick newborns.

This paper is meant to offer guidance for the inclusion of newborn interventions as part of USAID's next seven year plan. The information was compiled from reviewing documents and interviewing key informants at central, district, and community levels. Visits to health facilities were also made providing the opportunity to discuss the issues with health care providers as well as to make observations. These took place in greater Accra as well as three additional districts. The Community-Based Health Planning and Services (CHPS) districts were targeted since developing the interventions around the Community Health Officers (CHOs) seemed likely.

This exercise did not assess family planning activities, even though child spacing and limiting are key interventions for newborn survival. Family planning is already a Mission priority and the situation is well known.

This information was compiled over a period of eight days. The people consulted were selected based on their potential contribution to the inquiry. The site visits were selected based on convenience and make no pretense of being representative.
Finally, the consultant did most of the interviews and visits on her own without the benefit of a Ghanaian team to support the effort, provide introductions, or add perspective. As a result of these limitations, the information and conclusions in this paper probably need further validation before they can be accepted as reality.

It will be very important to go through a similar kind of assessment in a more participatory way, actively involving potential partners and stakeholders, before attempting to implement a newborn initiative. Without this kind of participation and ownership by partners, the initiative will be unlikely to have the support it needs.

II. BASIC COUNTRY DATA

GENERAL COUNTRY DATA

Ghana is a large country in West Africa with ten regions and 110 districts. The total population in mid-2001 is estimated at 19.9 million with a projected 724,000 births annually. (Population Reference Bureau – 2002 Women of our World) The increasing poverty makes it increasingly difficult to provide basic services.

In general, both health and service coverage statistics are significantly lower in the rural regions (not Greater Accra and Ashanti), and lowest in the three northern regions. Key health problems (not in order of priority) are malaria, tuberculosis, malnutrition, high maternal mortality, and infectious disease epidemics such as guinea worm, meningitis, cholera and sexually transmitted illnesses. Program design within the MOH focuses on improved access, quality, and efficiency of services, and mobilization of resources.

DATA RELATED TO NEWBORNS

- The DHS estimates Infant Mortality Rate (IMR) at 57/1000 live births, and the neonatal mortality rate (NNMR) at 30/1000 live births. They estimated 13 percent of deliveries ended with a low birth weight (LBW) baby and 12 percent of pregnancies did NOT end in live birth. The MOH 2001 report indicates 8.7 percent LBW and 2.5 percent stillbirths from facility reports.

- The DHS indicates 43 percent of births took place in a facility and 25 percent of deliveries were attended by trained TBAs. An estimated 4 percent deliveries were by C-section. MOH report shows a rate of institutional deliveries that was relatively flat over the last several years around 50 percent.

- The DHS indicates that 89 percent of pregnancies that ended in live birth received pre-natal care – primarily from nurses or doctors, while the MOH 2001 report estimates 98 percent. According to the DHS, 44 percent of women had pre-natal care by the 4^{th} month and 81 percent received one or more doses of tetanus toxoid vaccine while 18 percent received none. The MOH annual report indicates tetanus toxoid coverage for TT2+ is 73 percent and has been steadily increasing. This does not count the women who may have been protected with less than two immunizations (due to previous immunization status).

- The DHS indicates 4 percent of deliveries outside facility received post partum care and 50 percent of deliveries had no post partum care. The MOH annual report (2001) indicates the trend is upward at 54 percent having been at 33 percent in 1996.

- Malaria is endemic, although it peaks during the rainy season. 27 percent of children under five reported fever during two weeks prior to the DHS survey.

- Knowledge of family planning is high with 93 percent of women knowing at least one method of modern contraception and positive attitudes towards use, but contraceptive prevalence remains relatively low at 22 percent.

- Exclusive breast feeding tends to be low, with common practices of discarding colostrum, and introducing water and pre-lacteal feeds. According to the DHS, 25 percent of babies are breastfed within 1 hour of birth, and 20 percent of babies aged 4-5 months were fed exclusively breast milk during the 24 hours prior to the DHS survey. With intervention, exclusive breast feeding has increased in some areas.

- There are some traditional practices such as giving newborns enemas and putting herbs on the cord that are potentially life threatening.

- According the DHS, 11 percent of women were energy deficient (BMI <18.5) and 3 percent were chronically malnourished (arm circumference <23 cm.).

- HIV prevalence is still low with an estimated prevalence according to surveillance sites of just over 4 percent.

- Syphilis prevalence is low – out of 23 surveillance sites, 9 had no cases in 2001 and an additional 10 had less than .5 percent prevalence.

III. HEALTH SECTOR AND NEWBORN CARE

NATIONAL STANDARDS AND POLICIES

Ghana has been a leader in Africa in the development of maternal health strategies. As a result, many of the standards and policies for newborn care are quite complete since they have been included as part of the work on maternal health. There is also a defined child health policy which details newborn care as one of its five primary interventions.

All of the elements of essential newborn care as well as management of some of the complications have been included as part of the reproductive health standards of care with the exception of post partum Vitamin A distribution. These standards are reviewed periodically, including a review scheduled for October, 2002.

Even though newborns statistically fall under child health, the government has designated newborn care as part of maternal care until the newborn completes two weeks because the interventions and activities target the same providers as those caring for pregnant women. This distinction is somewhat less important than it might be in other situations because both child health and reproductive health are in the same office under the division of family health.

> ***CONCLUSION***
> ***Newborn standards and policies are well ahead of implementation and probably need not be a focus for USAID's newborn initiative.***

PRE-SERVICE TRAINING

The pre-service training curricula have been revised and to be consistent with the standards. JHPIEGO was involved with the development of a supplementary curriculum for safe motherhood and newborn care. The materials are mostly up to date and take newborn care fully into account.

This review did not include talking with people involved with the development of these curricula and it has already been a couple of years since they were developed. However, a preliminary review of the materials revealed the following:

- Pre-natal sections did not include malaria prevention and management (including intermittent treatment or prophylaxis), birth planning, or the role of voluntary counseling and testing for HIV in pregnancy management; and

- The immediate newborn care section did not mention Kangaroo care, nor did it outline low technology options for warming and managing low birth weight babies.

CONCLUSION

Pre-service newborn training curricula are mostly complete and probably do not need a lot attention beyond some simple updating. Implementation of the curricula in the training programs was not assessed.

WHO PROVIDES NEWBORN CARE?

In almost all cases, the attendant for a delivery also provides the newborn care. Deliveries are most often attended at home by TBAs. While many have been trained, their training included little on newborn care and they need updating. Immediate breast feeding, cord care, management of difficult breathing, and newborn exam were covered, but they were not emphasized. TBAs reported bathing the baby and setting them separately from the mother. The TBAs who were interviewed indicated they are doing very few deliveries – as few as one or two in a month and that they are used for normal deliveries.

Facility deliveries are usually under the supervision of a nurse midwife, although further investigation is necessary to determine what kind of attention women really receive since what happens in theory and what happens in practice may be significantly different. The midwives who were interviewed seemed to have the knowledge of appropriate newborn care.

It seems that private maternity homes add significant access to facility deliveries, even in rural areas. These may have "apprentices" working under the midwife, who also do deliveries. These are not as trained as a midwife, but are probably more trained than the TBAs. Private midwives also sometimes take on more of a public health role, doing outreach and interacting with the TBAs. The role of these private providers needs to be explored further.

The MOH Annual report for 2001 indicates that facility deliveries are not particularly increasing. Women indicate that cost is a significant barrier. The treatment they get when they go to facilities may also be a factor. The health centers and maternities visited were all doing 15-20 deliveries in a month with the exception of the Osu Maternity Home which reported 35-45. This last one? had roughly 20 midwives on staff in order to cover calls and the consultation load in addition to the deliveries. The two District hospitals also reported 35-40 deliveries/month. These deliveries represent a very small proportion of estimated births. (A large proportion of those deliveries reporting a skilled attendant are attributable to trained TBAs.) In any case, none of these facilities was terribly busy.

Two districts indicated they have a significant problem filling vacant positions for health personnel including midwives and others mentioned the human resource constraints. It is challenging to recruit and retain midwives working in rural areas. Out of ten health centers outside the district seat, only one had a midwife. Coincidentally, it was noted in most of the facilities visited that the majority of nurse were quite old, begging the questions of where the young nurses are going.

Another staffing problem is getting approval for new positions even when services are expanding. CHAG indicated they have difficulty getting additional positions approved, which also leads to staffing shortages.

Finally, with an estimated 724,000 deliveries per year (UN population division), if every midwife were to deliver 30 babies/month, a total of just over 2000 midwives would be needed. This is not far from the current supply, but the uneven distribution of providers and the unwillingness to seek care remain significant challenges.

CONCLUSIONS

- ***With the majority of deliveries (and presumably the majority of infant deaths) occurring in communities, community level interventions (household and TBAs) are essential for the strengthening of newborn care. These depend on identifying who is really attending deliveries.***
- ***If facility deliveries are to be encouraged, interventions will need to continue to address the quality and cost issues which limit their utilization. At the facility level, knowledge for appropriate management of labor and delivery seems appropriate but the newborn care aspects are not emphasized.***

IV. USAID STRENGTHS AND EXPERIENCES

USAID has a complex program with increased use of reproductive health and child health services as one of the intermediate results contributing to improved family health. While historically there has been a lot of emphasis on family planning and HIV prevention, the program currently includes activities for safe motherhood as well. The use of the Ghana Registered Midwives Association (GRMA) for training, and support for TBAs were meant to improve family planning uptake in addition to contributing to safer motherhood.

Strategies include increased demand through social marketing and behavior change activities, advocacy for policies to make family planning sustainable, and training and standards development for improved quality and access.

While newborn care activities should contribute to decreased neonatal (and hence child) mortality, the strategies and activities for a newborn initiative primarily correspond to those for reproductive health. Interventions for family planning, improved pre-natal and post partum care with an emphasis on those behaviors that influence newborn survival, and deliveries attended by trained providers will all contribute to better newborn outcomes.

Lastly, the Mission's support for the CHPS initiative provides a logical structure through which the profile of newborn care can be raised at the community level.

V. FINDINGS AND CONCLUSIONS - NEWBORN CARE INTERVENTIONS

As mentioned in the introduction, these observations and conclusions were drawn from a small number of facility and community visits and conversations with a few providers – all in the south of the country. As such, they may be taken as indications of problems, but need validation on a broader scale.

Taking the lead of the Saving Newborn Lives Initiative, investigation focused mainly at the lower levels of service delivery and the simple, non-technological interventions associated with essential newborn care.

As with other health interventions, poverty is probably the main constraining factor. Beyond that, while newborns are being cared for, these preliminary findings indicate that simple interventions like delayed bathing, earlier breast feeding, hygienic deliveries and cord care, malaria and anemia treatment, stimulation of infants at birth who are not breathing, and preparation for emergency referrals are all things that could be emphasized at the household, and even the health center levels to make a difference. Specific observations by stage follow.

PRE-NATAL CARE

- Birth planning is not seen as part of pre-natal care in either the standards or in practice. By report, limited work in community savings and transport is being done in some areas.

- The focus of pre-natal care still tends to be more risk-oriented rather than early identification and referral of danger signs (birth planning).

- Particularly in the city where other services are available:

    - Midwives tend to refer for lab tests and ultrasound. This increases the cost.

    - Midwives, even private ones, refer any complications to the hospital (pre-term, high blood pressure, delayed delivery, no fetal heart tones, bleeding, etc.).

- Syphilis and HIV screening are not part of pre-natal care, but prevalence is low.

- The DHS found that quality of pre-natal care was generally good with 75 percent of mothers reporting they had their blood pressure checked, urine tested, and received iron and folic acid tablets. This was corroborated during the field visits.

- There is cultural concern with constipation which may challenge compliance in taking iron. This needs to be confirmed.

- A WHO supported surveillance system picked up 20 cases of neo-natal tetanus and there were an estimated 400 cases in the country – but this needs to be verified. The government has been working on increasing tetanus immunization associated with pre-natal visits, and coverage appears to be increasing. They have plans for a mass campaign approach targeting districts where there is one or more tetanus case per 1000 live births. While the private sector may provide pre-natal care, they sometimes do not provide tetanus because of the reporting associated with receipt of government vaccine.

- Malaria is widespread and contributes significantly to the disease burden in Ghana.

    - Some places are doing chloroquine treatment during the first pre-natal visit then providing weekly prophylactic chloroquine. Compliance with these regimens is not known.

    - Roll back malaria has nearly approved the use of Fanisdar for intermittent preventive treatment during pregnancy as long as a woman doesn't receive it more often than monthly.

    - Treated bednets are expensive (75,000 - 100,000 Cedis) and retreatment chemicals are not easily available. Prices should come down to 40,000 for pregnant women and children under five with recently CIDA support, and there is hope the insecticide will last for four years.

    - Most children dying of malaria die before they are 18 months old.

LABOR AND DELIVERY

- Many providers are not doing very many deliveries in a month.

    - TBAs consulted may do 1-2. They indicate they take payment in kind and offer credit equivalent to 5000-30,000 Cedis. ($.60 – $3.75).

    - Health centers may do 20 deliveries/month. Depending on their location they may have more than one midwife, but have to refer complications.

- Cost seems to be a deterrent for women to deliver in facilities.

    - Private midwives in town charge 100,000 ($12.50) which includes supplies and medicines.

    - Public facilities charge 25,000 but supplies, medicines, transportation, and informal charges may be additional, perhaps adding up to 40,000-60,000 Cedis. ($3.00 up to $5.00 – $7.50).

- Health centers are limited in the services they provide so referrals tend to be to the hospital for delivery.

- While nurses report knowing general newborn care practices, they may not recognize (or practice) the priority of immediate breast feeding before completion of placenta delivery, use of Apgar to assess the newborn, postponing bathing, using the partograph even for "normal" deliveries, or being prepared (resuscitation and suction equipment) for complicated newborns. Such equipment WAS available in most of the facilities visited, but had to be requested.

- Eye treatment with antibiotics is not routine, and gonorrhea prevalence is likely less than 10 percent.

- Nurses were aware of supportive care (breast milk expression, cup feeding, hot water bottle, Vitamin K) for LBW babies. Practice was not observed.

- There are currently 40 Baby-Friendly hospitals (1 percent of facilities) and this has not increased over the past 2-3 years. Certification gets delayed due to shortage of staff to do the certification and rotation of the staff who have been trained. There are, however, several facilities currently awaiting certification.

- One district doctor had recognized the need for attention to the newborn and had written a manual for resuscitation directed towards his district staff – but this may not be the priority intervention to target.

POST PARTUM

- Officially recorded post partum visits occur at two and six weeks and are almost negligible at the facility level. However, both facilities and TBAs report seeing newborns for cord care. Often, these visits are not recorded as post partum care, nor is the full examination of mother and baby done. People indicate women are willing to bring their babies out for this care, but this needs to be validated.

- Some private midwives decide to keep their patients 3 days in order to avoid their returning with complications such as infection.

OVERALL CONCLUSIONS FOR NEWBORN CARE INTERVENTIONS

Newborn health overlaps with maternal health care and with the health of the baby as she or he begins to grow. Therefore, many of the interventions also have overarching benefits. With this in mind, newborn care cannot be introduced separately, but rather needs to take into account all the behaviors and activities that are already occurring, which positively influence newborn outcomes. This implies a lifecycle approach to newborn interventions.

Similarly, with the majority of deliveries (and presumably infant deaths) occurring in the communities, the community and household level should probably be the primary focus of the newborn care initiative. As one informant pointed out,

> *"People, particularly at the household and community level ARE taking care of newborns – they just need information and tools to adjust what they are doing to improve their survival. We don't need to convince them of completely new behaviors, but rather we need to work with them to identify the causes of their newborn deaths. They will then directly adopt improved behaviors."*

Simply put, the interventions at the community level would then entail reinforcement of TBA and household behaviors around delivery – encouragement for pre-natal care attendance and good nutrition, good clean delivery practices for normal deliveries, essential newborn care, and identification and referral of complications. Planning for referral in case of emergency, strengthening of the essential newborn component of the delivery, and inclusion of malaria management into pre-natal care will probably significantly impact neonatal mortality.

The implementation of the CHPS initiative with the availability of a community health nurse in the communities provides a logical mechanism for supporting these behaviors. This is discussed further in the next section.

Finally, USAID's timing with this initiative coincides with the implementation of the IMMPACT initiative (Initiative for Maternal Mortality Program Assessment) out of the University of Aberdeen (explained under "research questions" in the following section). They will be looking for donors to contribute to the program interventions for which they will be measuring the impact. USAID should follow their progress so that their interventions are consistent with the ones IMMPACT will be interested in.

OVERALL CONCLUSIONS

- ***Particularly with the effort this country has put into maternal care, many of the activities favoring newborn care are already in place. The focus probably needs to be on identifying those behaviors that need to be adjusted or emphasized so newborns get the care they need.***

- ***More formative and epidemiological research needs to be done to clarify behaviors and causes leading to newborn mortality, (e.g. stillbirth and low birth weight rates) but likely community interventions include:***

    - ***Community tracking of pregnancies with follow up for health education and identification of complications, for example by the CHOs;***

    - ***Receipt of key pre-natal services such as tetanus toxoid, supplemental iron and folate, and intermittent malaria treatment;***

    - ***Birth planning decreases the delays in deciding to seek care and in reaching care including health education on danger signs;***

- ***Clean deliveries and provision of essential newborn care (cord care, hygiene, warmth, stimulated breathing, and breast feeding) both at delivery and post partum; and***

- ***Prompt recognition and referral of danger signs.***

- ***In coordination with the roll back malaria initiative, inclusion of aggressive malaria management including intermittent treatment (possibly with S-P) and promotion of treated bednets should be considered as part of pre-natal care to control anemia and prevent stillbirths and LBW.***

- ***Post partum care is very weak and should be prioritized with an emphasis on receiving care within one to three days rather than the two week target currently tracked***.

VI. POTENTIAL PARTNERS AND STRATEGIES

ROLE OF THE COMMUNITY

As mentioned above, if the focus for newborn interventions will be at the community level, the community will be the primary partner for their implementation. The discussion of other partners implies their role as supporting community level interventions and providing technical intervention and back up when formal health care is needed.

Traditional Birth Attendants (TBAs)

TBAs have fallen out of favor due to the emphasis on deliveries by skilled attendants and their limitations in addressing maternal emergencies. However, in Ghana they are still providing a significant portion of delivery care and women prefer to go to them, whether due to cost, attitude, access, or comfort reasons. Pending a significant increase in utilization of the formal system, their potential for impacting newborn mortality may be significant if their activities can be focused and link with the formal service delivery system. TBAs do need ongoing supervision and training in order to maintain their effective behaviors and this may be where the TBA interventions have fallen short in the past.

Discussions with a couple of TBAs indicated:

- They had not had refresher training and had limited support. (through CHPS this may be addressed by the CHO);
- They report purchasing supplies on the open market, using funds women pay them for supplies. This seemed to work, although they personally subsidize women who can't pay;
- The focus of TBA training was on pre-natal and intra-partum care. There was limited orientation towards newborn or post partum care other than cord care;
- TBAs may do few deliveries – 1-3 or even less/month? This makes it difficult to make TBA interventions cost effective; and
- TBAs often accompany their referral patients to the facility. If they are well received, this offers an opportunity for supervision and teaching.

CONCLUSION

TBAs are important care providers for newborn care, and many of the essential newborn care interventions can feasibly be provided by them at the community level. They need linkages with the health system – potentially through public or private midwives and/or Community Health Officers. Their training needs to

include an emphasis on essential newborn care behaviors and post partum interventions.

MOH – OFFICE OF FAMILY HEALTH

Newborn mortality is a priority issue for the Office of Family Health (OFH) and they will clearly be involved with any program initiative. Due to the decentralization, they provide technical and programmatic support for work at the district level, but actual implementation depends on decisions at the regional and district levels.

The head of the family health unit would like to see newborn care as an arena that would bring pediatricians and obstetricians together to work as a team. Since both services fall under this office, such integration should be possible.

Christian Health Association of Ghana (CHAG)

CHAG provides about 40 percent of all formal health services. They do this under an agreement with the MOH whereby MOH provides money for salaries and some operating costs, but the Christian organizations manage the services. The partnership generally works well with each filling in the other's gaps (e.g. family planning in Catholic catchment areas). Recently, some of the organizations are also developing pre-service training institutions in order to address some of their staff shortages.

CONCLUSION
With MOH and CHAG providing the majority of formal health services, they need to be targeted both for assuring appropriate newborn care in the facilities and to encourage their support for newborn activities by TBAs as well as the community/household level.

PRIVATE SECTOR

While only validated through others, it seems that the private sector provides a significant amount of maternity care through private maternity homes in both rural and peri-urban areas. These maternity homes are staffed by midwives, but also often have a variety of assistants who have been trained on the job and may also do deliveries and newborn care.

Officially, oversight for these midwives' activities comes from the district health office. However, such oversight is limited. Additional support and oversight comes from the Ghana Registered Midwives Association (GRMA) for those midwives who choose to be registered. Currently, private midwives are not involved with TBA or community outreach and supervision except in exceptional cases.

- The census of private providers indicates that there are 140 private hospitals and 396 private maternity homes. The majority of these are in Accra and Ashanti regions, with the fewest in the three northern regions.. The other regions have 35-50 private maternity homes.

- The census also estimates that 3-5 percent of total deliveries, or 25 percent of attended deliveries, are done by GRMA members.

- Current GRMA registration is at 350, which may be about half of all private midwives. GRMA has taken a training role for private midwives in the past and they have regional structure for providing training and supervision to rural nurses. Alternatively, PRIME has been working on self-paced learning modules for private sector providers and private sector providers are reportedly invited to training through the District Health Management Teams.

- Urban private midwives report they may do 10-20 deliveries / month.

CONCLUSION
Private midwives apparently provide a significant amount of maternal care throughout the country as well as training to their assistants who then also do deliveries and newborn care. Ways to reach them should probably be considered when developing newborn care strategies.

Public/Private Partnership

Several people, both from government and GRMA raised the possibility of using private midwives to provide linkages and support for community outreach and TBA supervision. This would essentially be a model where the government would contract with private providers to perform the public health function in areas where public services are not available. Evidently, this is already being done by some districts, and could potentially offer a very interesting model for expanding the coverage and support for deliveries at the community level.

CONCLUSION
The possibility of contracting private midwives to provide training and support for community outreach, TBAs, (and CHOs where relevant) in areas where government services don't reach, is an interesting model and should be explored further.

SPECIAL INITIATIVES

Community Based Health Planning and Services (CHPS) Initiative

The CHPS initiative is the government strategy for bringing health services to the community in response to needs expressed by communities themselves. The strategy initially involves extensive community mobilization resulting in communities' requesting and making a commitment to support the work of the CHO, who is a trained nurse. She or he then performs a variety of public health as well as simple curative functions in the community. The strategy is population –based, with CHOs responsible for all the

preventive health activities in a defined catchment area as well as providing the entry level for curative services.

- CHPS is currently being replicated in 20 lead districts, with up to 80 percent of districts having taken at least some initial planning steps. It is projected that ultimately there will be a need for up to 5000 community health officers. Training institutions are gearing up to begin to meet this need. CHOs will be expected to remain in their communities for at least two years, and then they may be considered for midwifery training. It is hoped that the relationship (mutual commitment) to be established between the CHOs and their communities might help with retention.

- CHO activities include health education and counseling, family planning provision, pre and post natal tracking and consultation, management of a drug revolving fund for simple curative care, immunizations, and growth monitoring.

  CONCLUSION
  This is a very strong strategy, with a LOT of government support, for linking health services with the communities they serve. It is probably the most logical platform for initiating improved newborn care services.

Integrated Management of Childhood Illness (IMCI)

- IMCI is moving slowly. It has taken two years to pilot in four districts and it has been difficult to get agreement to move it forward. There is now a tentative plan to integrate it with the Roll Back Malaria (RBM) initiative. In the process, it will be scaled up to twenty districts. Ways to decrease costs are being explored, including decreasing training for senior staff and decision makers, but people strongly feel the front line worker needs at least the full training.

- The IMCI protocols include a separate protocol for babies less than two months old. However, given the infrequence of cases relative to general practice, it is difficult to emphasize. Currently, one and a half of the eleven training days are devoted to newborn care with an emphasis on breastfeeding and diseases of the newborn.

  CONCLUSION
  Even though newborns are part of child health, the nature of the interventions as well as the constraints with IMCI mean this is probably not the best base for carrying the newborn initiative. That said, it is still an important strategy for improving the attention to newborns once they reach the facilities in need of care – particularly if the newborn protocols are adequately emphasized during training and supervision.

Roll Back Malaria (RBM)

RBM strategies were recently elaborated at a national workshop. They include intermittent preventive treatment of pregnant women, possibly with sulfadoxine-pyrimethamine (S-P), promotion of insecticide treated nets (ITNs), and prompt recognition and treatment of malaria cases. It will be monitoring operational issues and side effects with the introduction of S-P. Specific strategies and conclusions have been discussed in the section on pre-natal care.

Other donors

UNICEF, WHO, and other bilaterals (the SWAP partners group), are all involved with both maternal and child health. However, no one has so far taken a decisive lead in newborn care in Ghana.

RESEARCH QUESTIONS

Monitoring and Evaluation

With the lack of evidence-based links between interventions and outcomes, and with the challenges of measuring peri-natal mortality directly, it is difficult to measure outcomes of newborn interventions. Otherwise, many of the process indicators used for maternal health are also relevant for newborn health.

With respect to outcomes, there are a few questions that bear exploring:

- The DHS approach with detailed questionnaires inquiring about the result of every pregnancy can potentially yield a lot of information about incidence and causes for peri-natal mortality. However, it is a sensitive area and ways to assure the listening and facilitation skills of the interviewers are essential. Women are likely to remember these outcomes because they are so traumatic, but they may be reticent to report them. The larger number of newborn deaths makes the sample size easier than for maternal mortality and the pregnancies of the direct informant without inquiring about the sisters is therefore adequate.

- Specific interventions depend on the causes of peri-natal mortality. As a result, it is important to try and disaggregate mortality data according to cause as much as possible. Stillbirth rates are important, as are early deaths (facility related) contrasted to later deaths (community related).

The "BABIES" model, a 12-cell epidemiological model looking at causes based on two variables: birth weight and age at death, may be helpful. By looking at these two variables, it is possible to infer cause and therefore carefully select interventions. Such a review process, if carried out with District or facility staff, also serves as a catalyst for program refinement and implementation. A description of this process is available in The Healthy Newborn, A Reference Manual for Program Managers.

Ghana's health information system may even have some of the data necessary to carry out this assessment since their facilities routinely collect birth weights, although they do not distinguish between fresh and macerated stillbirths, and they do not capture deaths once they have left the facility.

Process indicators would reflect the specific activities selected for an essential newborn care intervention "package" in Ghana. These might include:

- Exclusive breast feeding rates;
- Tetanus toxoid coverage raters;
- Post – partum care coverage, particularly if it could focus on care provided by one or three days post partum;
- Deliveries attended by skilled and/or trained attendants;
- Anemia rates;
- Intermittent treatment for malaria during pregnancy; and
- Family planning coverage, or birth interval.

IMMPACT Initiative

The biggest need in the maternal and newborn care field is for data to suggest the most effective and cost effective interventions. Such data would link the process indicators with outcomes, making it possible to make program decisions for specific scenarios based on data. Ghana is one of the three focus countries for the IMMPACT initiative, which will:

- Develop enhanced methods and tools for measuring outcomes and attribution;
- Use those tools to evaluate the effectiveness and cost effectiveness of various intervention strategies (groupings of interventions); and
- Provide capacity building of local institutions in outcome evaluation and evidence-based decision making.

As part of the initiative, there will be a working group on newborn interventions - identifying both strategic groupings of interventions and a work plan for their testing. It is expected that the initiative will identify "best bets, best buys" by 2006, but will have some ideas by 2004. They are depending on donors to fund the intervention "packages" for testing while their money will be used for the evaluative research.

CONCLUSION

USAID should coordinate with the IMMPACT agenda and consider funding newborn interventions that could serve as a laboratory for IMMPACT's documentation.

ANNEXES
COMPILED LIST OF CONCLUSIONS AND RECOMMENDATIONS

NEWBORN INTERVENTIONS - WHAT AND WHERE?

1. Particularly with the effort this country has put into maternal care, many of the activities favoring newborn care are already in place. The focus probably needs to be on identifying those behaviors that need to be adjusted or emphasized so newborns get the care they need.

2. Newborn standards and policies are well ahead of implementation and probably need not be a focus for United States Agency for International Development's (USAID) newborn initiative

3. Pre-service newborn training curricula are mostly complete and probably do not need a lot attention beyond some simple updating. Implementation of the curricula in the training programs was not assessed.

4. With more than 50% of deliveries (and presumably the majority of infant deaths) occurring in communities, community level interventions (household and Traditional Birth Attendants (TBAs) are essential for the strengthening of newborn care. These depend on identifying who is really attending deliveries. More formative and epidemiological research need to be done to clarify behaviors and causes leading to newborn mortality, but likely community interventions include:
    - Community tracking of pregnancies with follow up for health education and identification of complications, for example by the Community Health Officers (CHOs)
    - Receipt of key pre-natal services such as tetanus toxoid, supplemental iron and folate, and intermittent malaria treatment
    - Birth planning decreases the delays in deciding to seek care and in reaching care including health education on danger signs
    - Clean deliveries and provision of essential newborn care (cord care, hygiene, warmth, stimulated breathing, and breast feeding) both at delivery and post partum
    - Prompt recognition and referral of danger signs

5. If facility deliveries are to be encouraged, interventions will need to continue to address the quality and cost issues which limit their utilization. At the facility level, knowledge for appropriate management of labor and delivery seems appropriate but the newborn care aspects are not emphasized.

6. In coordination with the roll back malaria initiative, inclusion of aggressive malaria management including intermittent treatment (possibly with S-P) and promotion of treated bednets should be considered as part of pre-natal care to control anemia and

prevent stillbirths and Low Birth Weight (LBW).

7. Post partum care is very weak and should be prioritized with an emphasis on receiving care within one to three days rather than the two week target currently tracked.

NEWBORN INTERVENTIONS – HOW?

1. TBAs are important care providers for newborn care, and the many of the essential newborn care interventions can feasibly be provided by them at the community level. They need linkages with the health system – potentially through public or private midwives and/or CHOs. Their training needs to include an emphasis on essential newborn care behaviors and post partum interventions.

2. With Ministry of Health (MOH) and Christian Health Association of Ghana (CHAG) providing the majority of formal health services, they need to be targeted both for assuring appropriate newborn care in the facilities and to encourage their support for newborn activities by TBAs as well as the community/household level.

3. Private midwives provide a significant amount of maternal care throughout the country as well as training assistants who then also do deliveries and newborn care. Ways to reach them should be considered when developing newborn care strategies. Ghana Registered Midwives Association (GRMA) may have an effective regional structure for training and support. This, along with other options, needs to be explored further.

4. Community Health Planning and Services (CHPS) is a very strong strategy, with a LOT of government support, for linking health services with the communities they serve. It is probably the most logical platform for initiating improved newborn care services.

5. Even though newborns are part of child health, the nature of the interventions as well as the constraints with integrated Management of Childhood Illnesses (IMCI) mean this is probably not the best base for launching the newborn initiative.

6. The possibility of contracting private midwives to provide training and support for community outreach, TBAs, (and CHOs where relevant) in areas where government services don't reach is an interesting model and should be explored further.

7. USAID should coordinate with the Initiative for Maternal Mortality Program Assessment (IMMPACT) agenda and consider funding newborn interventions that could serve as a laboratory for IMMPACT's documentation.

LIST OF PEOPLE CONTACTED / KEY INFORMANTS

Ghana Health Services – Central

- Dr. Sam Adjei, Deputy Director General, Ghana Health Services
- Dr. Henrietta Odoi-Agyarko, Deputy Director of Public Health, Head of Family Health Unit
- Dr. Frank Nyonator, Director of Policy Planning, Monitoring and Evaluation
- Dr. Gloria Quansah Asare, Head of Reproductive Health Unit
- Dr. Isabella Sagoe-Moses, Head of Child Health Unit

Ghana Health Services – Regional / District levels

- Dr. Gabriel Agboado, Director of Health Services, S. Tongu District
  Visit to District Hospital in Sogakope
- Geoffrey Salakpi, Technical Officer, Akatsi District
- Philip Nani-Tome, Technician, Akatsi district
- Bernice Ganu, Community Health Officer, Dzogadze Village, Akatsi District
- Akuvi Cunyo, TBA, Dzogadze Village, Akatsi District
- Katherine Djabaku, Midwife, Akatsi Health Center, Akatsi District
- Dr. Elias Sory, Medical Director, Central Region
- Ms. Patricia Antwi, District Director, Abura Asebu Kwamankese District
- Hanna Mensa, Community Health Officer, Gyaban Krom Zone, AAK
- Ekia Qwantsima, Trained TBA, Gyaban Krom
- Sarah Ampromah, Nurse Midwife, Abura Dunkwa District Hospital

Christian Health Association of Ghana (CHAG)

- Dr. Joseph Teye Nuertey, Medical Director for the Alpha Medical Center and Technical Advisor for Reproductive and Child Health - CHAG

Ghana Midwives Association

- Kathryn Ababio, President
- Ernestina Djokotoe, Vice-President
- Beatrice Ntow-Manu, Treasurer
- Elizabeth Kissi – tour guide and private practitioner

Accra Maternity Homes

- Osu Maternity Home (public) – Juliana Atoge, Principal Nursing Officer
- Emie's Maternity Home (private) – Emilia Tei, Nurse Midwife
- El Shadai Maternity Home and Clinic (private) – Jemima Sackey, Nurse Midwife

Ridge Hospital Maternity Ward – Jan Paehler, guide

WHO

UNICEF

- Dr. Aliu Bello, Health Office Chief

Africare

Awuor Odaga, Country Representative
Margaret Afriye, Project Coordinator

Basics II

Dr. Joseph Somuah, Program Coordinator
Dr. Adwoa Steel, Headquarters
Evelyn Lamphey, Nutrition Officer
Selina Esantsi, IMCI Field Coordinator

Linkages

Charlotte Acquah, Curriculum Development Specialist (previously involved with nurse midwife training development)

IMMPACT – Initiative for Maternal Mortality Program Assessment

Professor Wendy Graham, University of Aberdeen
w.graham@abdn.ac.uk

USAID

Ursula Nadolny, Director – Health and Population Unit
Juliana Pwamang, Program Specialist for Reproductive Health
Jane Wickstrom, Technical Advisor for Reproductive Health
Peter Wondergem, HIV/AIDS Team Leader, Monitoring and Evaluation Specialist
Jan Paehler, Technical Advisor for Child Health

REFERENCES

Ghana Government Documents

1. 2001 Annual Report; Reproductive and Child Health Unit, Public Health Division, MOH/GHS.
2. Ghana Demographic and Health Survey, Ghana Statistical Service and Macro International;
3. National Reproductive Health Service Protocols, Ministry of Health, January, 1999.
4. HIV Sentinel Surveillance 2001, National AIDS Control Program, Disease Control Unit, Ministry of Health, Ghana, May, 2002.
5. Report on Census of Private Medical Practice in Ghana; Ministry of Health with Danida; Accra, Dec. 2001.
6. Reproductive Health Classroom and Clinical Activity Guide for Training Midwives – A Supplement to the Midwifery Curriculum, produced by Ministry of health Human Resources Development Division, Ghana in cooperation with JHPIEGO, August, 2000.
7. "Report on Anti-Malaria Drug Policy Review Workshop" - Aug. 27-29,2002.
8. Assefa, Afework; "Summary of Key Documents and Articles on Health" compiled for USAID/Ghana, Aug. 2002

Other Ghana References

1. Blankson, J.M., "Problems of Neonatal Tetanus as seen in Ghana" , Department of Child Health, University of Ghana Medical School, African Journal of Medical Science, (1977)6,1-6
2. Mothercare -John Snow International; "Africa Initiatives: Addressing Obstetric and Neonatal Complications in Africa from Community and Facility Perspectives, Descriptive Reports from Ghana, Malawi and Uganda"; 1998.
3. Futures Group – Maternal Health Study: "Maternal and Neonatal Program Effort Index (MNPI) – Ghana"; 2002.
4. www.usaid.gov/country/afr/gh/ - USAID profile of Ghana, 2002.
5. USAID Country Strategy for Ghana, FY 1997-2001.
6. USAID/Ghana FY2003 Results Review and Resource Request, March, 2001.
7. Strategic Framework for Malaria Control During Pregnancy in the Africa Region – draft, Jan. 2002; Part of Roll Back Malaria Initiative.

General Newborn Care References

1. Lawn, Joy, McCarthy, Brian, and Ross, Susan Rae; The Healthy Newborn, A Reference Manual for Program Managers; a collaborative effort by CARE and Centers for Disease Control; 2002.

2. Save the Children – Saving Newborn Lives; State of the World's Newborns, 2001.
3. Tinker, Anne, and Koblinsky, Marge; "Making Motherhood Safe"; 2020 - World Bank Discussion Papers; p. 21-50.
4. USAID: "Birth Spacing: A Call to Action – Birth Intervals of Three Year5s or Longer for Infant and Child Health"; 2002.
5. WHO working papers on Infant Intermittent Preventive Treatment and possible association with EPI – June, 2002.
6. Bang, Abhay et al; "Burden of Morbidities and the Unmet need for Health Care in Rural Neonates – A Prospective Observational Study in Gadchiroli, India"; Indian Pediatrics; Sept. 2001; www.indianpediatrics.net/sept2001/sept-952-965.htm.

Draft Assessment Tools

- The Basics experience in Senegal using District and overall newborn care assessment tools
- Saving Newborn Lives assessments and work outlines for Malawi, Pakistan, Nepal and Bangladesh
- Background on the MNH project's RRAP rapid assessment methodology
- USAID/Delhi proposal for Women and Children's Health Results Package (WACH), April, 1996.